CLAIMS

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1. An apparatus comprising:

a housing defining a housing aperture and a resin inlet opening therein;

a resin transport mechanism that moves resin through the housing aperture; and

a lead-in gap in the housing at the resin inlet opening.

2. The apparatus of claim 1 further comprising a heat transfer inhibitor adjacent the resin inlet opening that inhibits heat transfer from at least one of the housing and the conveying means to the resin at the opening, thus improving the flow of resin adjacent the opening.

3. The apparatus of claim 1, wherein the resin transport mechanism comprises an auger.

4. The apparatus of claim 3 wherein the housing includes a substantially cylindrical opening in which the auger sits and the lead-in gap is a widening of the cylinder that decreases in a direction of rotation of the auger.

5. The apparatus of claim 4 wherein the lead-in gap also decreases in size in a longitudinal direction of the substantially cylindrical opening.

6. A method for preparing a toner resin from a base resin, comprising:

conveying a base resin to an aperture in a housing of a toner extruder, the housing surrounding a conveyor;

providing a lead-in gap at a feed port end of the conveyor;

inhibiting adhesion of melted resin to walls of the aperture;

adding chemical initiator to a toner extruder;

mixing the base resin and the chemical initiator within the extruder to form the mixed resin; and

conveying the mixed resin within the extruder to an extruding die.

7. The method of claim 6 wherein inhibiting adhesion includes repelling melted base resin into a flow of base resin.

8. The method of claim 6 wherein inhibiting adhesion includes inhibiting heat transfer from the extruder to the base resin at the aperture.

9. The method of claim 8 wherein inhibiting the heat transfer further comprises spacing at least one of the housing and the conveyor from the resin at the aperture.

10. The method of claim 6, further comprising premixing the base resin with the chemical initiator.

11. The method of claim 6, further comprising cooling the base resin.

12. A toner extruding apparatus including a lead-in gap in an inlet end of a housing surrounding a resin conveyor, the lead-in gap having a greater dimension on an inlet side of the housing and decreasing in size in a rotational direction of the resin conveyor.

13. The apparatus of claim 12 further comprising a decrease in size of the lead-in gap in a longitudinal direction of the housing.

14. A toner extruding apparatus comprising:

a resin conveyor in a substantially cylindrical cavity in a housing, the resin conveyor rotating about a longitudinal axis of the conveyor;

a feed port at a feed port end of the resin conveyor into which base resin is fed; and

a lead-in gap formed in the housing at the feed port end of the conveyor.

15. The apparatus of claim 14 wherein the lead-in gap extends along an arc of the housing, the lead-in gap becoming smaller in a direction of rotation of the resin conveyor.

16. The apparatus of claim 16 wherein the lead-in gap becomes smaller in a direction of the rotational axis of the conveyor.

17. The apparatus of claim 14 wherein the lead-in gap is sized to accommodate a predetermined flow rate of base resin.

18. The apparatus of claim 14 wherein a size of the lead-in gap is variable.

19. The apparatus of claim 14 further comprising a heat transfer inhibitor arranged to keep walls of the feed port cooler than a predetermined temperature.

20. The apparatus of claim 2 wherein the heat transfer inhibitor cools walls of the feed port to reduce adhesion of the base resin to the walls.